

WHAT IS CLAIMED IS:

1 1. A method of placing fluid droplets onto an object, the method
2 comprising:
3 moving a fluid ejection device including a carriage having an air
4 flow reducing member and at least one fluid ejector carried by the carriage in a
5 first direction;
6 reducing air flow between said fluid ejection device and said object
7 with the member leading the at least one fluid ejector; and
8 ejecting fluid droplets onto the object.

1 2. The method of claim 1, wherein said fluid ejection device is
2 comprised of a plurality of fluid ejectors.

1 3. The method of claim 1, wherein:
2 moving said fluid ejection device relative to said object in a second
3 direction;
4 reducing air flow between said fluid ejection device and said object
5 with a member leading the fluid ejection device as said device moves in said
6 second direction; and
7 ejecting fluid droplets onto said object as said ejection device is
8 moved in said second direction.

1 4. The method of claim 3, wherein said fluid ejection device is bi-
2 directionally moved in a straight scanning line.

1 5. The method of claim 4, wherein said fluid ejector device includes
2 nozzles arranged in a plane spaced from said object and said airflow deflecting
3 means has a boundary extending in said plane perpendicular to said line.

1 6. The method of claim 5, wherein said boundary is straight.

1 7. The method of claim 6, wherein said straight boundary is flat.

1 8. A method of forming an image on media with an inkjet printing
2 mechanism which includes an inkjet pen carriage, comprising:
3 attaching an inkjet pen to the inkjet pen carriage;
4 moving the inkjet pen and an airflow deflector provided by the
5 carriage proximate said inkjet pen on said carriage in a first direction, said
6 deflector leading said pen to thereby reduce airflow between said relatively
7 moving pen and media; and
8 ejecting fluid droplets onto said media as said carriage and pen are
9 moved in said first direction.

1 9. The method of claim 8, wherein said airflow deflector is on said
2 carriage.

1 10. The method of claim 9, comprising ejecting fluid droplets from a
2 plurality of pens on said carriage.

1 11. The method of claim 10, wherein:
2 said carriage is bi-directionally moved relative to said media and
3 including positioning a second airflow deflector proximate said pens with said
4 second deflector leading said pens during movement of said carriage in a second
5 direction opposite to said first direction; and
6 ejecting fluid droplets onto said media as said carriage and pens are
7 moved in said second direction.

1 12. The method of claim 11, wherein said carriage is moved in a
2 straight scanning line.

1 13. The method of claim 12, wherein said pens include nozzles
2 arranged in a plane spaced from said media and at least one of said airflow
3 deflectors has a boundary extending in said plane perpendicular to said line.

1 14. The method of claim 13, wherein said boundary is straight.

1 15. The method of claim 14, wherein said straight boundary is a flat
2 end.

1 16. An inkjet pen carriage for holding an inkjet pen, the carriage
2 comprising:
3 a first airflow reducing member configured and positioned to at
4 least partially block flow of air between an ink ejection nozzle of a pen on said
5 carriage and an object to be printed during carriage movement in a first
6 direction.

1 17. The carriage of claim 16, further including a second airflow
2 reducing member positioned to at least partially block flow of air between an ink
3 ejection nozzle of a pen mounted on said carriage and said media during carriage
4 movement in a second direction.

1 18. The carriage of claim 17, wherein said airflow reducing member
2 comprises first and second deflectors.

1 19. The carriage of claim 18, wherein said deflectors are integrally
2 formed on said carriage.

1 20. The carriage of claim 18, wherein said deflectors are affixed to said
2 carriage.

1 21. The carriage of claim 18, wherein said carriage defines a plurality of
2 receptacles for holding plural inkjet pens arranged along a line of carriage
3 movement, a first one of said deflectors being positioned at one side of said
4 carriage and a second one of said deflectors being positioned at a second side of
5 said carriage whereby said deflectors at least partially block airflow to said pens
6 during reciprocal motion of said carriage.

1 22. The carriage of claim 21, wherein said receptacles are configured
2 to hold pens having fluid ejection nozzles arranged in a plane and said deflectors
3 each have a boundary extending in said plane perpendicular to said line.

1 23. The carriage of claim 22, wherein said boundary is straight.

1 24. The carriage of claim 23, wherein said straight boundary is a flat
2 end.

1 25. The inkjet printing mechanism comprising:
2 a reciprocally moveable pen carriage;
3 an inkjet pen having an inkjet ejection nozzle and mounted on said
4 carriage; and
5 a first airflow deflector coupled to the carriage and positioned
6 proximate said nozzle to at least partially block flow of air between said nozzle
7 and media on which printing is to take place during carriage movement in a first
8 direction.

1 26. The printing mechanism of claim 25, wherein said deflector is
2 mounted on said carriage.

1 27. The printing mechanism of claim 26, further including a second
2 inkjet pen having a second ink ejection nozzle on said carriage and a second
3 airflow deflector coupled to the carriage and positioned proximate said second
4 nozzle to at least partially block flow of air between said second nozzle and said
5 media during carriage movement in a second direction.

1 28. The printing mechanism of claim 27, wherein said first and second
2 deflectors are integrally formed on said carriage.

1 29. The printing mechanism of claim 27, wherein said deflectors are
2 affixed to said carriage.

1 30. The printing mechanism of claim 27, wherein said carriage defines
2 a plurality of receptacles for holding inkjet pens arranged along a line of carriage
3 movement, a plurality of said pens respectively mounted in said receptacles, a
4 first one of said deflectors being positioned at one side of said carriage and a
5 second one of said deflectors being positioned at a second side of said carriage
6 whereby said deflectors at least partially block airflow to said pens during
7 reciprocal motion of said carriage.

1 31. The printing mechanism of claim 30, wherein said nozzles are
2 arranged in a plane and said deflectors each have a boundary extending in said
3 plane.

1 32. The printing mechanism of claim 31, wherein said boundary is
2 straight.

1 33. The printing mechanism of claim 32, wherein said straight
2 boundary is a flat end.

1 34. The printing mechanism of claim 27, wherein said nozzles travel
2 through a print zone during movement of said carriage, one of said deflectors
3 being outside said print zone when said carriage reaches an end of reciprocal
4 movement.

1 35. An inkjet carriage for holding an inkjet pen, the carriage comprising:
2 a first means for reducing airflow positioned to at least partially
3 block flow of air between an ink ejection nozzle of a pen on said carriage and an
4 object to be printed during carriage movement in a first direction

1 36. An inkjet printing mechanism comprising:
2 a reciprocally moveable pen carriage;
3 an inkjet pen having an inkjet ejection nozzle and mounted on said
4 carriage; and

5 a first means coupled to the carriage for deflecting and at least
6 partially blocking flow of air between said nozzle and media on which printing is
7 to take place during carriage movement in a first direction.

1 37. A fluid ejection device comprising:
2 a reciprocally moveable carriage;
3 at least one fluid droplet ejector mounted on said carriage;
4 a support for an object onto which fluid droplets are to be ejected;
5 and
6 a deflector coupled to the carriage for deflecting airflow away from
7 a trajectory of fluid droplets ejected from said ejector toward an object on said
8 support.

1 38. The fluid ejection device of claim 37, further comprising a second
2 deflector coupled to the carriage for deflecting airflow away from said trajectory,
3 said deflectors being positioned on said carriage relative to said ejector to lead
4 said ejector during each direction of movement of said carriage.

1 39. The fluid ejection device of claim 38, wherein said deflectors have
2 boundaries which extend parallel to said support.

1 40. The fluid ejection device of claim 38, wherein said deflectors are
2 flexible.

1 41. An inkjet printing mechanism comprising:
2 a movable fluid ejection device; and
3 an airflow deflector coupled to the fluid ejection device to at least
4 partially block the flow of air between the fluid ejection device and media being
5 printed upon during movement of the fluid ejection device relative to the media,
6 wherein the air flow deflector is flexible.

1 42. The printing mechanism of Claim 41, wherein the fluid ejection
2 device includes:
3 a carriage; and

4 at least one fluid ejector carried by the carriage, wherein the airflow
5 deflector is coupled to the carriage.